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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,946	07/21/2003	Georges Emmanuel Blin	G&C 30566.306-US-01	4627
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GATES & COOPER LLP HOWARD HUGHES CENTER 6701 CENTER DRIVE WEST, SUITE 1050 LOS ANGELES, CA 90045			EXAMINER GOGIA, ANKUR	
			ART UNIT 2187	PAPER NUMBER

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/623,946	<b>Applicant(s)</b> BLIN ET AL.	
	<b>Examiner</b> Ankur Gogia	<b>Art Unit</b> 2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/21/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Rule 105 Request for Information***

1. During a search of the instant application, the examiner discovered a white paper on stone® disk arrays that discloses similar technology to that is claimed in the instant application. It is noted that the assignee of the instant application shares assignment with the whitepaper. Accordingly, the examiner would appreciate any information the applicants might be able to provide that would assist the examiner in his determination of the patentability of the instant invention. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application. Some information that might be useful is provided below:
2. Did applicants sell or offer for sale a product that embodies the invention claimed in the instant application?
3. Was there a definite sale, or offer to sell, more than one year before the effective filing date of the instant application?
4. In response to this requirement, please provide copies of each publication which any of the applicants authored or co-authored and which describe the disclosed subject matter of claims 1-44.
5. In response to this requirement, please provide the title, citation and copy of each publication that is a source used for the description of the prior art in the disclosure.
6. In response to this requirement, please provide the names of any products or services that have incorporated the claimed subject matter.

7. In response to this requirement, please provide the names of any products or services that have incorporated the disclosed prior art, specifically the stone® disk array, Discreet file system and stone® file system.

8. In responding to those requirements that require copies of documents, where the document is a bound text or a single article over 50 pages, the requirement may be met by providing copies of those pages that provide the particular subject matter indicated in the requirement, or where such subject matter is not indicated, the subject matter found in applicant's disclosure.

9. The fee and certification requirements of 37 CFR 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 CFR 1.105 that are included in the applicant's first complete communication responding to this requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 CFR 1.105 are subject to the fee and certification requirements of 37 CFR 1.97.

10. The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained may be accepted as a complete reply to the requirement for that item.

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11. This requirement is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

The instant application having application No. 10/623,946 has a total of 44 claims pending in the application; there are 4 independent claims and 40 dependent claims, all of which are ready for examination by the examiner.

***Oath/Declaration***

1. The Applicant's oath/declaration, filed 3 November 2003, has been reviewed by the examiner and is found to conform to the requirements prescribed in 37 C.F.R. 1.63.

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

3. As required by M.P.E.P. 609(c), the Applicant's submission of the Information Disclosure Statement dated 21 July 2003 is acknowledged by the examiner and the cited references have been considered in the examination of the claims now pending. As required by M.P.E.P. 609(c)(2), a copy of the PTOL-1449 initialed and dated by the examiner is attached to the instant office action.

***Specification***

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. **The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided.** The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The disclosure is objected to because of the following informalities: On page 10, line 26 it states "requesting **that that** a clip". Appropriate correction is required.

6. The use of the trademark Octane™ has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

7. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Data Processing Apparatus and Method for Determining the Amount of Free Storage Space in Such an Apparatus.

### ***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-11, 20-22, 31-33 and 42-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claim 1 recites the limitation "whether said further data" in lines 15-16. There is insufficient antecedent basis for this limitation in the claim. This can be overcome by restating the claim to recite, "whether further data".

11. Also for claim 1, on line 7 the claim states that the processing means is configured to update the usage data. In lines 9-16, the claim states that the processing means is configured to analyse the usage data, store information in the datastore and read information from the data storage means. From the statement of these limitations, it is unclear whether the processing means is configured to perform one or the other or both tasks. This can be overcome by, for example, changing line 9 to state "said processing means is further configured to".

It is also noted that since the limitation states "processing means is configured to" in applying prior art it is not necessary for the reference to teach processing means that actually perform the task, the processing means of the reference only needs to be capable of performing the task.

12. Further line 15 of claim 1 states that the processing means reads information from the data storage means to determine if there is enough free space to store further data, however on line 13 it is stated that the information indicating the amount of free space is stored in the datastore. It is unclear as to how the information can be obtained



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from the data storage means if it is stored in the datastore. For this Office Action the claim is being interpreted to have meant that the information is read from the datastore.

13. The term "efficient" in claims 9, 20, 31 and 42 is a relative term which renders the claims indefinite. The term "efficient" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

14. All other claims rejected and not specifically mentioned are rejected for inheriting the deficiencies of the claims from which they depend.

### ***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1, 3-8, 12, 14-19, 23, 25-30, 34 and 36-41 are rejected under 35 U.S.C.

103(a) as being obvious over Stoppani, Jr. (U.S. Patent 5,287,500) in view of

"Operating Systems Internals and Design Principles" by William Stallings and "Microsoft Computer Dictionary" (MSCD) being provided as extrinsic evidence.

#### **Claim 1**

It is noted that in claim 1 the Applicant recites "means", however this is not being taken as Applicant's invoking of 112, sixth paragraph (means plus function), since the applicant did not recite "means for".

Stoppani, Jr. discloses a data processing apparatus, comprising:

data storage means having a plurality of defined storage elements (Fig. 1, Items 106, 108 and 110; Col. 2, Lines 29-30),

**data storage means** containing usage data indicating which of said storage elements contains data (Fig. 6; Col. 6, Lines 19-24), and

processing means (Fig. 1, Item 124) configured to update said usage data in response to data being stored within said data storage means (Col. 6, Lines 19-24), wherein

said memory means (Fig. 1, Item 112; Col. 2, Lines 30-31) further contains a datastore (Fig. 6, Item 240; Col. 6, Lines 25-28), and said processing means is configured to:

analyse said usage data to determine the number of said storage elements not containing data (Col. 6, Lines 35-43);

store information within said datastore indicating said number of storage elements not containing data (Col. 6; Lines 38-43); and

read information from said data storage means to determine whether said further data may be stored (Fig. 4, Step 186; Col 6, Lines 44-47).

In the reference to the data storage means of the prior art, it is not stated explicitly that the disk drives have a plurality of defined storage elements however, a plurality of storage elements are inherent to any disk.

Stoppani, Jr. discloses that the data storage means contains the usage data and not the memory means as is required by the claim.

However, Stallings discloses wherein the usage data is stored in the memory and not the disk (pg. 549-550).

Stoppani, Jr. and Stallings are analogous art because they are from the same field of endeavor of managing storage space on a storage device.

At the time of the invention it would have been obvious to a person of ordinary skill in the art, having the teachings of Stoppani, Jr. and Stallings before them, to store the usage data in the memory means rather than the data storage means.

The motivation for doing so would have been the ability to search for free space without the need for disk access (Stallings, pgs. 549-550).

Therefore, it would have been obvious to combine Stallings with Stoppani, Jr. for the benefit of determining the amount of free space on a disk without disk access to obtain the invention as specified in claim 1.

### **Claim 3**

Stoppani, Jr. further discloses wherein said data storage means comprises a hard disk (Col. 2, Lines 29-30).

### **Claim 4**

Stoppani, Jr. further discloses wherein said usage data comprises a plurality of data elements, each data element corresponding to one storage element on said data storage means (Fig. 6 and Col. 6, Lines 19-24).

In the embodiment referred to, Stoppani, Jr. discloses a bitmap containing usage data, however as is seen in MSCD on pg. 61 a bitmap is "a data structure in memory that represents information in the form of a collection of individual bits". Therefore in a

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bitmap containing usage data the usage data comprises a plurality of data elements (collection of individual bits) with each element corresponding to a storage element on the data storage means.

**Claim 5**

Stoppani, Jr. further discloses wherein said usage data comprises a bitmap (Fig. 6 and Col. 6, Lines 19-24).

**Claim 6**

Stoppani, Jr. further discloses wherein said analysis of said usage data comprises parsing said bitmap (Col. 6, Lines 28-43).

**Claim 7**

Stoppani, Jr. further discloses wherein said data store comprises at least one cache within the kernel memory of said memory means (Col. 6, Lines 25-28).

In applying the art to this claim, an entry of the free space table is being viewed as the "at least one cache". The free space table is within the kernel memory based on the following interpretation by the examiner. On pg. 5, lines 14-16 of the specification of the instant application, kernel memory is defined as that memory reserved for use by the operating system. In col. 2, lines 33-36 of Stoppani, Jr. it is stated that the primary memory contains the operating software such as the file system. So the primary memory must also contain the kernel memory and since the free space table is part of the file system, which is part of the operating system, it must be in the kernel memory.

**Claim 8**

Regarding claim 8, although Stoppani, Jr. does not specifically disclose that the data in his system is image data, the functionality of his system would be the same no matter what type of data was used in the system. That is, Stoppani, Jr. discloses a system for allocating storage space on storage devices. In his system, he overcomes the problem of keeping track of free space on the storage devices through the use of a bitmap. Since a bitmap merely represents in a “yes” or “no” manner whether a location on the storage device holds any data and in allocating space all that is needed is whether there is a portion of storage with enough free spaces to hold data, the system would be able to use a bitmap to keep track of and enable the allocation of storage space no matter what type of data was used.

In regards to the instant application, the Applicants are attempting to overcome the problem of keeping track of the amount of free space available on a storage device using the same method disclosed in Stoppani, Jr. That is, the Applicants are using a bitmap to keep track of the free space on a storage device in order to allocate space on the device for storing image data. However, in the specification of the instant application, the Applicants do not give any reasoning to show that their system would not operate in the manner disclosed if the data stored in the system was not image data.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Stoppani, Jr. before them, to use the method and system as described by Stoppani, Jr. in storing image data.

**Claims 12 and 14-19**

Claim 12 discloses a method of storing data comprising the steps of storing usage data, analyzing the usage data to determine the amount of free space, storing the amount of free space and reading the amount of free space to determine if more data can be stored. This method is the same as that which the system of claim 1 is configured to perform. Therefore, claims 12 and 14-19 are rejected under the same arguments as for claims 1 and 3-8.

**Claims 23 and 25-30**

Claim 23 discloses a computer-readable medium having computer-readable instructions executable by a computer such that, when executing said instructions, a computer will perform the steps of storing data comprising the steps of storing usage data, analyzing the usage data to determine the amount of free space, storing the amount of free space and reading the amount of free space to determine if more data can be stored. This computer program performs the same method as that which the system of claim 1 is configured to perform. Since the system of the prior art used to reject claims 1 and 3-8 is able to perform these steps and since a hardware system cannot perform any task without having the software to instruct it do so, the system in the prior art must have software to enable these steps to be carried out. Therefore, claims 23 and 25-30 are rejected under the same arguments as for claims 1 and 3-8.

**Claims 34 and 36-41**

Claim 34 discloses a computer system programmed to execute stored instructions such that in response to said instructions said system is configured to

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perform the steps of storing data comprising the steps of storing usage data, analyzing the usage data to determine the amount of free space, storing the amount of free space and reading the amount of free space to determine if more data can be stored. This computer system performs the same method as that which the system of claims 1 and 3-8 is configured to perform. Since the prior art used to reject claims 1 and 3-8 is able to perform these steps, the system in the prior art must be programmed to execute these steps. Therefore, claims 34 and 36-41 are rejected under the same arguments as for claims 1 and 3-8.

17. Claims 2, 9-11, 13, 20-22, 24, 31-33, 35 and 42-44 are rejected under 35 U.S.C. 103(a) as being obvious over Stoppani, Jr. (U.S. Patent 5,287,500) in view of "Operating Systems Internals and Design Principles" by William Stallings and "Microsoft Computer Dictionary" (MSCD) being provided as extrinsic evidence as applied to claims 1, 3-8, 12, 14-19, 23, 25-30, 34 and 36-41 above and further in view of Bopardikar et al. (U.S. Patent 6,404,975).

**Claim 2**

Stoppani, Jr. and Stallings do not disclose expressly wherein said data storage means comprises a RAID, however Bopardikar et al. disclose this in Col. 3, Lines 61-63.

Stoppani, Jr., Stallings, and Bopardikar et al. are analogous art because they are from the same field of endeavor of allocating storage space in a data processing apparatus.

At the time of the invention it would have been obvious to a person of ordinary skill in the art, having the teachings of Stoppani, Jr., Stallings, and Bopardikar et al. before them, to use RAID as the data storage means.

The motivation for doing so would have been the ability to recover from data corruption (Bopardikar et al. Col. 3, Lines 56-65).

Therefore, it would have been obvious to combine Bopardikar et al. with Stoppani, Jr. and Stallings for the benefit of being able to recover from data corruption to obtain the invention as specified in claim 2.

#### **Claim 9**

Stoppani, Jr. and Stallings do not expressly disclose wherein each said storage element has a storage capacity configured to provide efficient storage of an image frame of a predetermined definition.

Bopardikar et al. disclose a data storage system wherein the storage elements have a storage capacity configured to provide efficient storage of an image frame of a predetermined definition (Col. 5, Lines 22-50).

Stoppani, Jr., Stallings, and Bopardikar et al. are analogous art because they are from the same field of endeavor of allocating storage space in a data processing apparatus.

At the time of the invention it would have been obvious to a person of ordinary skill in the art, having the teachings of Stoppani, Jr., Stallings, and Bopardikar et al. before them, to configure storage elements of a data storage means to have the capacity to provide efficient storage of an image frame of a predetermined function.



The motivation for doing so would have been increased data transfer rates (Bopardikar et al. Col. 1, Lines 21-29).

Therefore, it would have been obvious to combine Bopardikar et al. with Stoppani, Jr. and Stallings for the benefit of being able to recover from data corruption to obtain the invention as specified in claim 9.

**Claim 10**

Stoppani, Jr. and Stallings do not expressly disclose wherein each said storage element has the storage capacity to store only one of said image frames of a predetermined definition. However, Bopardikar et al. disclose this in Col. 5, Lines 22-50.

Stoppani, Jr., Stallings, and Bopardikar et al. are analogous art because they are from the same field of endeavor of allocating storage space in a data processing apparatus.

At the time of the invention it would have been obvious to a person of ordinary skill in the art, having the teachings of Stoppani, Jr., Stallings, and Bopardikar et al. before them, to configure storage elements of a data storage means to have the capacity to provide efficient storage of an image frame of a predetermined function.

The motivation for doing so would have been increased data transfer rates (Bopardikar et al. Col. 1, Lines 21-29).

Therefore, it would have been obvious to combine Bopardikar et al. with Stoppani, Jr. and Stallings for the benefit of being able to recover from data corruption to obtain the invention as specified in claim 10.

**Claim 11**

Stoppani, Jr. and Stallings disclose wherein said datastore comprises a plurality of caches (Stoppani, Jr. Col. 6, Lines 25-28; Stallings pg. 550) however, they do not disclose expressly wherein each cache is configured to receive information relating only to storage elements configured to receive image frames of a specified definition.

Stoppani, Jr. discloses wherein each cache receives information about a different disk and Stallings discloses wherein each cache receives information about different sub ranges of a disk, however they do not disclose these ranges to be divided based on image frames of various specified definitions.

Bopardikar et al. disclose dividing a disk into various logical volumes with each volume being used for different image frame definitions (Col. 5, Lines 48-50).

Stoppani, Jr., Stallings, and Bopardikar et al. are analogous art because they are from the same field of endeavor of allocating storage space in a data processing apparatus.

At the time of the invention it would have been obvious to a person of ordinary skill in the art, having the teachings of Stoppani, Jr., Stallings, and Bopardikar et al. before them, to divide a storage device into multiple partitions with each partition being used for a different image frame definition.

The motivation for doing so would have been increased data transfer rates (Bopardikar et al. Col. 1, Lines 21-29).

Therefore, it would have been obvious to combine Bopardikar et al. with Stoppani, Jr. and Stallings for the benefit of being able to recover from data corruption to obtain the invention as specified in claim 11.

**Claims 13 and 20-22**

Claim 13 depends from 12 which discloses a method of storing data comprising the steps of storing usage data, analyzing the usage data to determine the amount of free space, storing the amount of free space and reading the amount of free space to determine if more data can be stored. This method is the same as that which the system of claim 1 is configured to perform. Therefore claim 13 is similar to claim 2 and claims 13 and 20-22 are rejected under the same arguments as for claims 2 and 9-11.

**Claims 24 and 31-33**

Claim 24 depends from claim 23 which discloses a computer-readable medium having computer-readable instructions executable by a computer such that, when executing said instructions, a computer will perform the steps of storing data comprising the steps of storing usage data, analyzing the usage data to determine the amount of free space, storing the amount of free space and reading the amount of free space to determine if more data can be stored. This computer program performs the same method as that which the system of claim 1 is configured to perform. Since the system of the prior art used to reject claims 1 and 3-8 is able to perform these steps and since a hardware system cannot perform any task without having the software to instruct it do so, the system in the prior art must have software to enable these steps to be carried .

out. Therefore claim 24 is similar to claim 2 and claims 24 and 31-33 are rejected under the same arguments as for claims 2 and 9-11.

**Claims 35 and 42-44**

Claim 35 depends from 34 which discloses a computer system programmed to execute stored instructions such that in response to said instructions said system is configured to perform the steps of storing data comprising the steps of storing usage data, analyzing the usage data to determine the amount of free space, storing the amount of free space and reading the amount of free space to determine if more data can be stored. This computer system performs the same method as that which the system of claims 1 and 3-8 is configured to perform. Since the prior art used to reject claims 1 and 3-8 is able to perform these steps, the system in the prior art must be programmed to execute these steps. Therefore claim 35 is similar to claim 2 and claims 35 and 42-44 are rejected under the same arguments as for claims 2 and 9-11.

***Relevant Art Cited By the Examiner***

18. The following prior art made of record and not relied upon is cited to establish the level of skill in the Applicant's art and those arts considered reasonably pertinent to the Applicant's disclosure. See M.P.E.P. 707.05(c).

The following references teach using a bitmap to track the free space on a storage device.

**U.S. Patent Number**

5,390,315  
6,510,505  
6,636,879  
6,175,900  
6,820,122  
6,023,744

**Relevant Sections**

Fig. 1  
Abstract, Cols. 1-3  
Fig. 2, Cols. 1-7  
Figs. 4 and 7, Background  
Fig. 2  
Fig. 6

In addition, the white paper on stone disk arrays presents a file and disk system with features that appear to be similar to those of the invention disclosed in the instant application.

***Conclusion***

19. This Office action has an attached requirement for information under 37 CFR 1.105. A complete reply to this Office action must include a complete reply to the attached requirement for information. The time period for reply to the attached requirement coincides with the time period for reply to this Office action.

20. The following is a summary of the treatment and status of all claims in the application as recommended by M.P.E.P. 707.07(i):

- a. Per the instant office action, claims 1-44 have received a first action on the merits and are subject of a first action non-final.


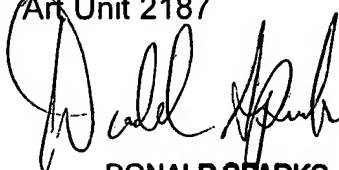
21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ankur Gogia whose telephone number is 571-272-4166. The examiner can normally be reached on M-F 8:00am-4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 571-272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10/31/2005

  
Ankur Gogia  
Examiner  
Art Unit 2187  
  
**DONALD SPARKS**  
SUPERVISORY ~~PATENT~~ EXAMINER